SG-Link-200® Connecting and calibrating mV/V sensors

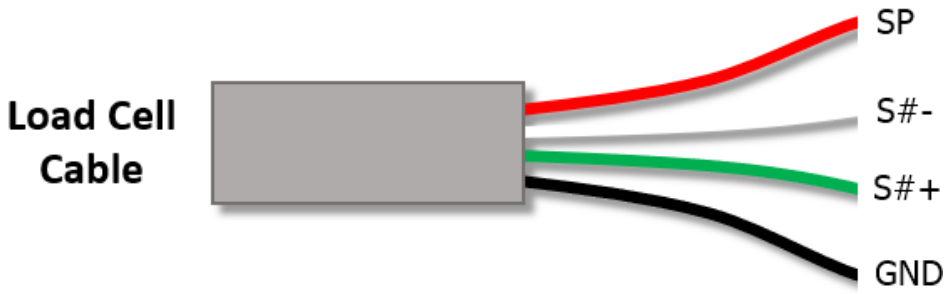
Component Overview

The SG-Link-200 is a 3-channel wireless analog sensor node with 3 differential input channels (strain channels) designed to support strain gauges and load cells.

Series MIN800 Miniature Tension/Compression Loadcell with 2 mV/V Output sensitivity and 100 LBF full scale range used for the following examples.

Connecting the Load Cell to the SG-Link-200

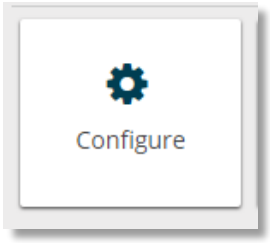
1. Connect the wires of the sensor to one of the SG-Link-200 differential input channels (channels 1-3) according to the below diagram (reference the SG-LINK-200 Quick Start Guide):



Note: If the output goes down when load is applied to the sensor reverse the green and white wires in the SG-Link-200.

Configuring the SG-Link-200 in SensorConnect

1. Open SensorConnect and power on the SG-Link-200.
2. From the node list select the node being tested.
3. Click on the **Configure** tile under the Control options.

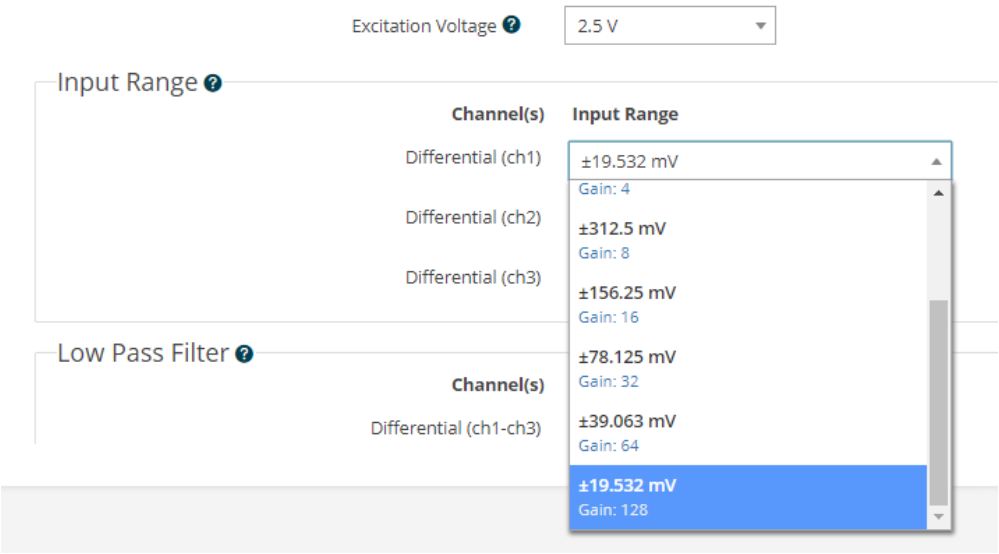


4. Take the sensitivity of the sensor and multiply it by the channel excitation voltage. In the case of the SG-Link-200 the excitation voltage is **2.5V**. The result of this will allow you to select the appropriate Input Range. See the below example.

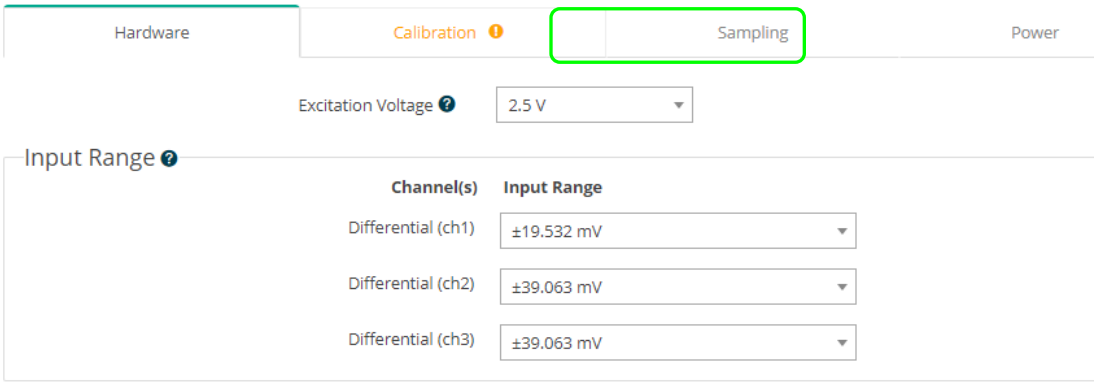
   Example:

Loadcell output sensitivity:	2mV/V
Excitation voltage:	2.5V
Result:	2mV/V x 2.5V = **5.0mV**

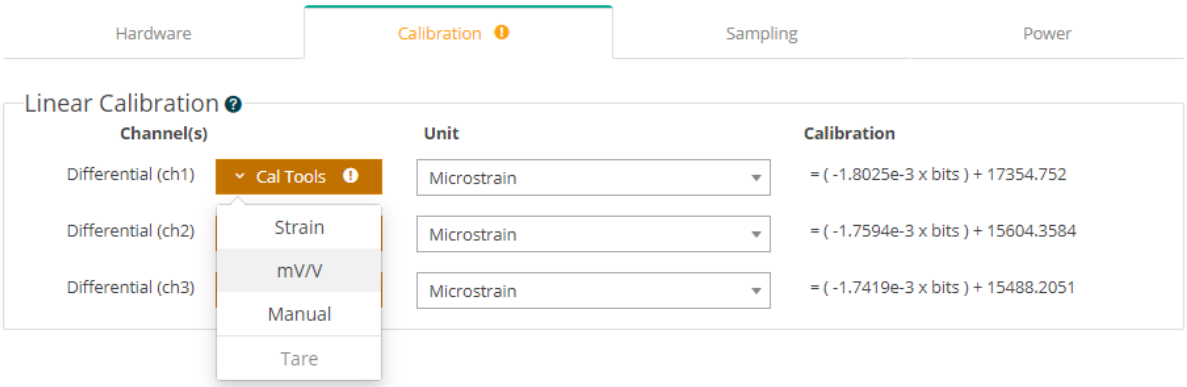
   In this example you would want to select **+/- 19.532mV** from the Input Range dropdown options.



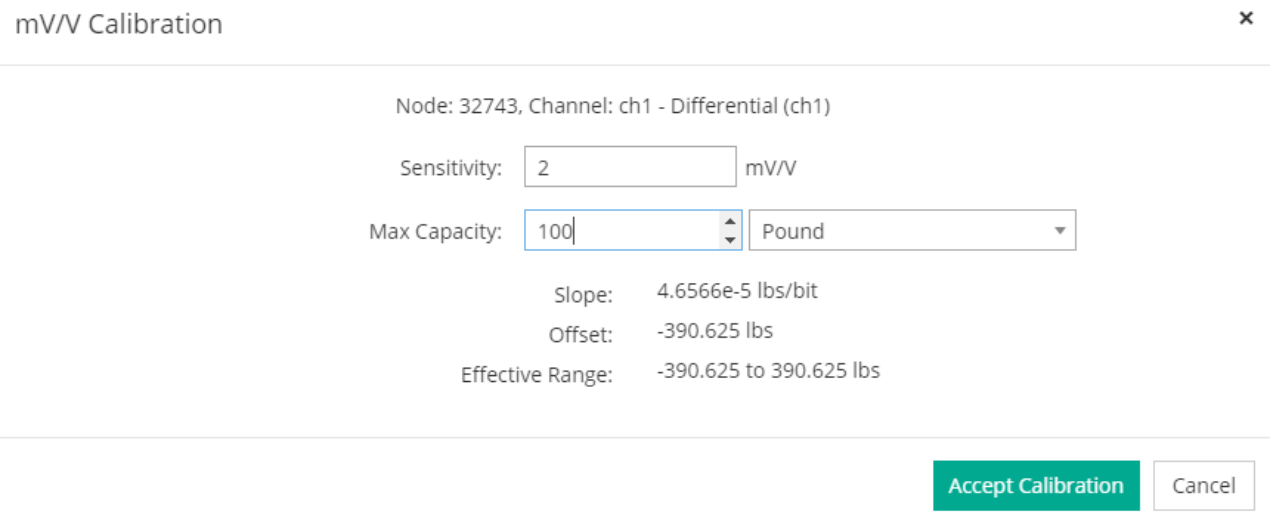
5. Click on the **Calibration** tab.



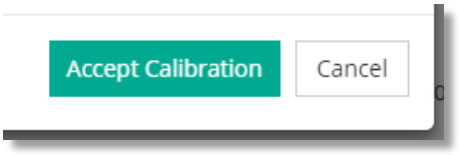
6. Click on **Cal Tools**, then select **mV/V**.



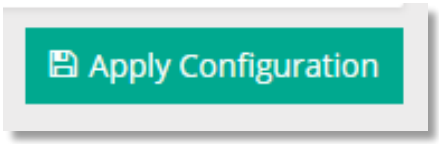
7. Enter the sensor's output sensitivity into the **mV/V max capacity** input field.
8. Enter the sensor's full scale range into the **Max Capacity** input field.
9. Enter the Unit desired from the drop-down menu.



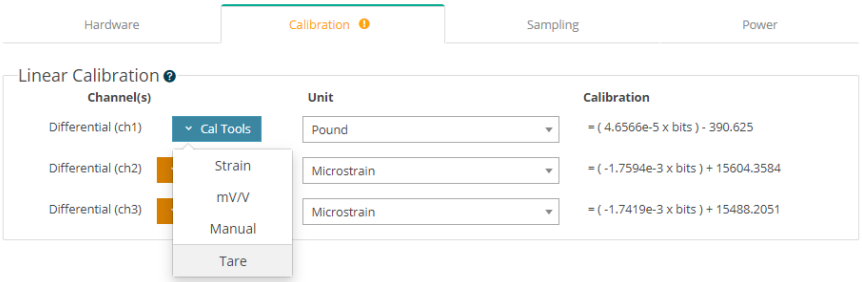
10. Click on **Accept Calibration.**



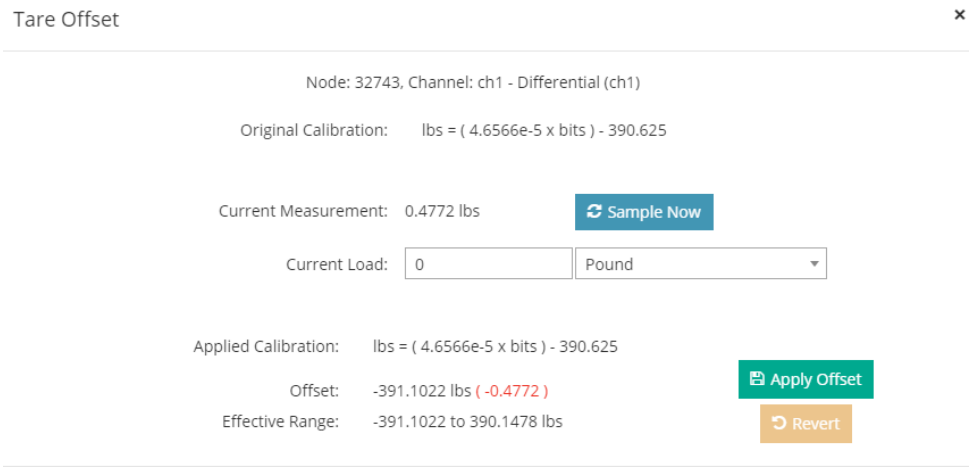
11. Click on **Apply Configuration.**



12. Go back to the **Cal tools** and Select **Tare**

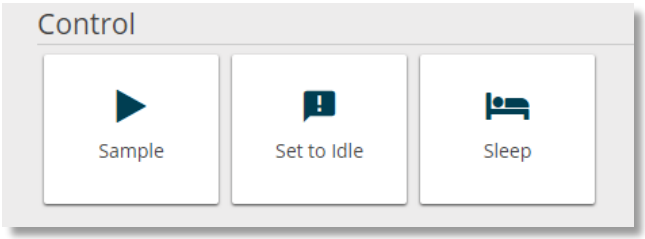


13. With no load on the load cell (or to zero out with a pre-loaded sensor) Click the **Sample Now** (a good idea here is to click the Sample Now button several times and observe the current Measurement remains approx. same value).

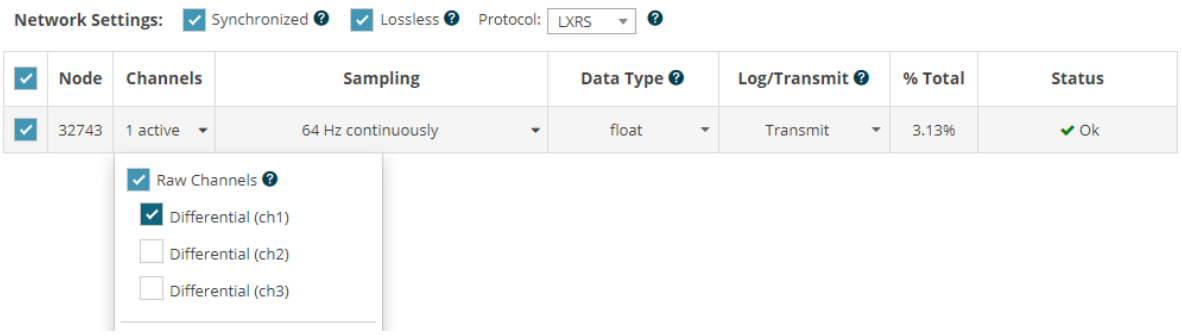


14. Click the **Apply Offset** button to write the value to the node.

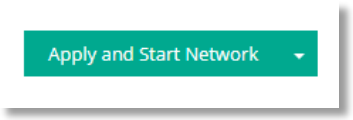
15. Under the Device section, click on the node, then click on the **Sample** tile from the Control panel.



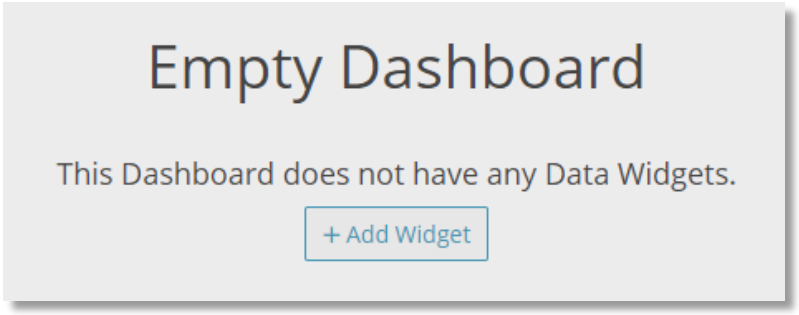
16. Enable the channel being tested with the Sensor and the other sampling desired.



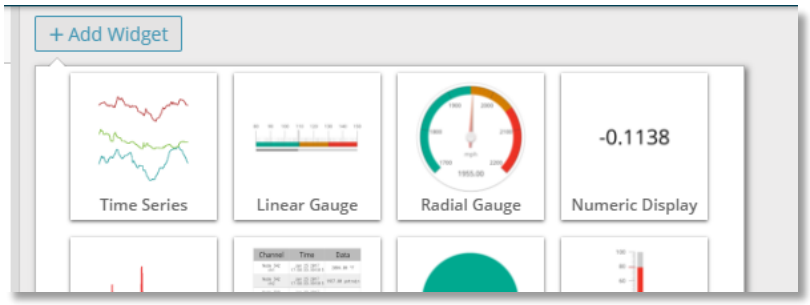
17. Once node is all configure Click **Apply and Start Network.**



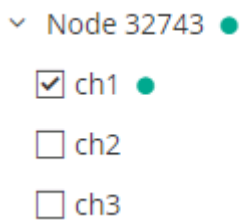
18. Click the **Data** tab, then click on **+Add Widget.**



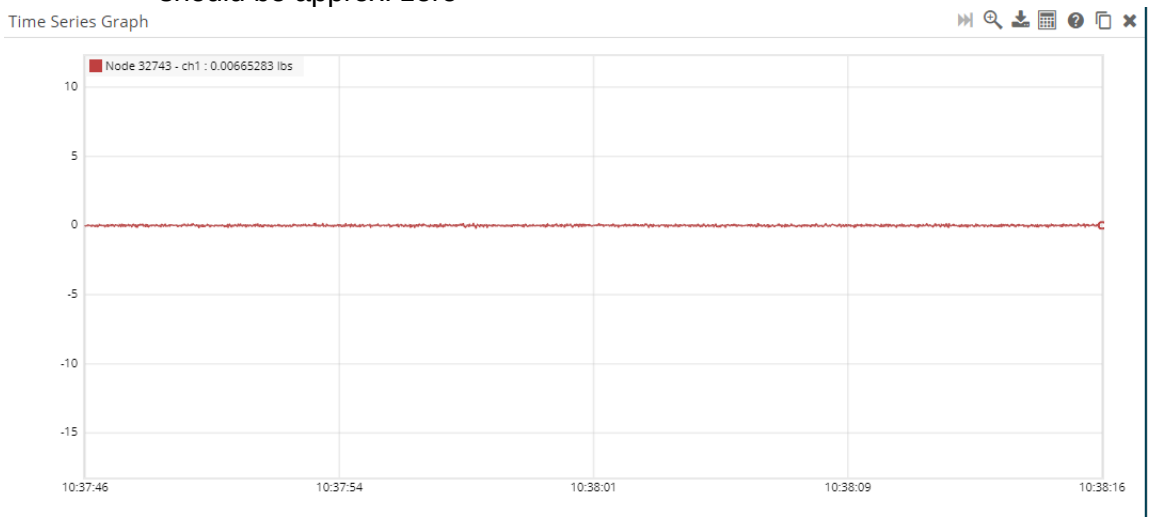
19. Select the **Time Series** widget.



20. Select the node and channel to view the data output in the time series widget.



21. With no load (or at the pre-loaded value the channel was Tared at) the data coming in should be approx. zero



22. If possible, place known loads on the sensor to verify calibration.